

SummaryABSTRACT

~~Disclosed is a~~ A Raman amplifier (10) ~~comprising~~including at least one length of ~~amplifying~~ fiber (12) and at least a coupler (14) for coupling at least a first pump laser module (16) and a second (18) pump laser modules ~~(18)~~ to ~~said Raman~~the amplifying fiber (12), the first pump laser module (16) ~~comprising~~including a frequency discriminator (24) for selecting an optical frequency to be emitted with an optical power exceeding an optical power of remaining optical frequencies that are also emitted by ~~said the~~ first pump laser module (16). The first optical frequency is ~~selected to be spaced~~ apart from a local maximum (28; 36; 48) in optical power of ~~said the~~ remaining optical frequencies, and the second pump laser module (18) emits at an optical frequency one Stokes-frequency above the frequency of ~~said the~~ local maximum (28; 36; 48). The first optical frequency and the frequency of ~~said the~~ local maximum are chosen on Stokes-frequency above the signal frequency range. As a consequence, the Raman gain provided in the Raman amplifying fiber 12 is broadened.